

BIBLIOGRAPHICAL NOTICE.

Allgemeine Zoologie, oder Grundgesetze des thierischen Baues und Lebens, von H. ALEXANDER PAGENSTECHER. Erster Theil. Svo. Berlin: Wiegandt, Hempel, and Parey, 1875.

THE book promises to be one of the best text-books of the principles of zoology that we possess. Its author is in favour of the doctrine of the origin of species by evolution; but this does not hinder his giving a most impartial statement of the facts and inferences upon which a philosophical zoology must be founded. The general principle upon which he has worked may be expressed as follows in his own words:—"Nature can only be described. Explanations, the establishment of causalities and purposes, mechanical, dynamical, monistic, and dualistic systems are attempts at the description of nature. The most useful of them will be that which furnishes the most complete result in the simplest and most easily intelligible way."

Starting from this view of the natural-history problem, Prof. Pagenstecher describes in his second book the properties of animal bodies in general, commencing with the ultimate simple constituents of the body, passing to the combination and differentiation of these constituents to form composite living bodies, then discussing the idea of animal individuality and polymorphism (or, as he calls it, pleomorphism), and, finally, the morphological arrangement of the parts of which the bodies of animals are composed. The arrangement and treatment of the matter in this book makes it an admirable summary of the broad principles of animal morphology.

In the third book (the last in the part now before us) the author treats of the limitation and classification of the animal kingdom; and this leads him to give an historical account of the doctrine of the species from the earliest periods to the present day. His concluding remarks upon this subject are excellent, and show strikingly the moderation of his tone. He says:—"There is no doubt that species are not eternal, and that they are variable. The duration of the individual species with all their peculiarities, or even the duration of a part of the specific peculiarities, such as finds expression in the characters of genera or families, and therefore the duration of genera or families, is very unequal. Some are long-lived, others not, without one being able to see the causes of this clearly from the surrounding conditions. The changes which have occurred in the appearance of the animal and vegetable world in the course of the geological epochs agree with what we know of changes by variability, of metamorphoses in developmental history, and of difference in nearly allied forms; but they go beyond these. At least much in the fossil forms stands for the present uncombined with the living. The action of external circumstances upon the form and structure of animals has not yet been sufficiently investigated; in all cases there is in opposition to their consequences a very powerful agent, which we name specific persistence." These views are further de-

veloped by the author; but the preceding passage may suffice to indicate his general opinion on this knotty subject. The remainder of the book is devoted to a consideration of the principles of classification, and a discussion of the boundary between animals and plants. We look forward to the publication of the second part of Prof. Pagenstecher's book, and recommend it with confidence to the notice of the readers of the 'Annals.'

MISCELLANEOUS.

Organic Remains in the Metamorphic Rocks of Harris.

To the Editors of the Annals and Magazine of Natural History.

GENTLEMEN,—It may interest the readers of the 'Annals' to know that we have recently discovered evidence of life in the so-called "Laurentian Rocks" of Harris, in the Hebrides. The specimens in question are as clearly organic in their nature, and as well preserved in their minute structure, as is the case with Silurian or Devonian fossils of an analogous structure (such, for example, as *Stromatopora*). At present we have merely made a preliminary microscopic examination of the specimens; and we simply wish, therefore, to draw attention to the fact, so interesting in view of recent discussions, that unequivocal organic bodies occur in such ancient deposits as the lowest metamorphic rocks of Harris. We may add, however, that the specimens are little altered, the skeleton of the fossil being calcareous, apparently dolomite, and exhibiting all the minute details of its structure; whilst the chambers are filled, as so commonly in organic remains from younger deposits, with transparent silica. Finally, though apparently differing from it in important respects, we believe that our specimens will contribute powerfully to the solution of the controversy which has been of late years carried on as to the true nature of *Eozoön*.

We remain, Gentlemen,

Yours faithfully,

H. ALLEYNE NICHOLSON,
JAMES THOMSON.

Reproduction of Amblystoma.

By M. BLANCHARD.

The Mexican *Amblystoma*, the adult form of the axolotl, has just deposited eggs for the first time in the menagerie of the Museum. The fact is of considerable importance, as it does away with the ideas which have arisen with regard to the sterility of adult Batrachia which displayed extreme fecundity while they remained in the condition of larvæ.

The researches of M. Aug. Duméril upon the axolotls will not be